

1 24. The method of claim 22, wherein the predetermined display format
2 includes a display format for an icon.

1 25. The method of claim 22, wherein the predetermined display format
2 includes a display format for a menu.

1 26. The method of claim 22, further comprising communicating the patient
2 image data through a user interface layer.

1 27. The method of claim 22, further comprising providing patient image
2 data to one of the internet and an intranet.

Please add the following new claims:

1 28. (New) The data management system of claim 1, further comprising a
2 third component having a functionality code segment and a user interface segment,
3 wherein the container application is configured to communicate patient data between
4 the functionality code segments of the first, second and third components, respectively,
5 and a common user interface.

1 29. (New) The data management system of claim 28, wherein the
2 functionality code segment of the third component is configured to communicate with
3 the Internet.

1 30. (New) The data management system of claim 5, wherein the service
2 communicates with the first and second service layers via a predetermined protocol.

1 31. (New) The data management system of claim 30, wherein the
2 predetermined protocol includes componentware.

REMARKS

Entry of the above amendments is respectfully requested. Claims 12-18 have been canceled without prejudice or disclaimer. Claim 1 has been amended to further define the

invention. Claims 28-31 have been added to the application. Claims 1-11 and 19-31 are pending in the application.

The specification has been amended to add the application number and filing date of the parent application.

Figures 1-6 have been amended to correspond to the specification and to add missing reference numbers. By way of an accompanying request to approve drawing changes, applicant hereby proposes to revise Figure 1 to remove the label "PathSpeed Extend Workflow". Applicant proposes to revise Figure 2 to remove the label "PathSpeed Extend" and to amend block 30 to read "PACS Application." Applicant proposes to revise Figure 3 to remove the label "PathSpeed Extend Framework," to amend block 30 to read "PACS Application," to amend block 82 to read "PACS CORBA Server," and to amend block 84 to read "PACS Event Generator." Applicant proposes to revise Figure 4 to add reference number 12 to refer to the block labeled "Patient Context Creation," to remove the term "PathSpeed" and replace it with the term "PACS" and to remove the term "PathSpeed Extend." Applicant proposes to amend Figure 5 to add reference number 30 to refer to the block labeled "PathSpeed Application" and to replace the term "PathSpeed" in the same block with the term "PACS." Applicant proposes to revise Figure 6 to amend block 30 to read "PACS Application." Applicant proposes to revise Figure 7 to remove the term "PathSpeed." Applicant submits that all proposed drawing changes are supported by the specification and no new matter has been added.

Favorable reconsideration and allowance of the application is respectfully requested in light of the foregoing amendments and the remarks which follow.

1. Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. ("Wong"; U.S. Pat. No. 6,260,021) in view of Mason et al. ("Mason"; U.S. Pat. No. 5,668,998). Claim 1 has been amended to further define the invention.

A. Allowability of Independent Claim 1 and Dependent Claims 2-6

Amended claim 1 is directed towards a data management system for patient data and requires, among other elements, a container application having a first user interface layer in communication with a first component and a second user interface layer in communication with a second component. The first and second user interface layers are configured to communicate patient data between the functionality code segments of the first and second components, respectively, and a user interface. As discussed in an exemplary embodiment in the specification, the container application can be configured to integrate the functionality of a PACS component, a RIS component and other components. The PACS component and the RIS component each include a respective functionality and user interface. The user interface layers of the container application control the PACS and RIS user interfaces. In this exemplary embodiment, the user interface layers can be configured to convert the PACS and RIS user interfaces to a uniform user interface format.

In contrast, neither Wong nor Mason teaches or suggests a container application with first and second user interface layers configured to communicate patient data between the functionality code segments of first and second components, respectively, and a common user interface. Rather, Wong teaches a three-tiered object-oriented system for medical image distribution. The third tier includes client systems that have object-oriented GUI's (graphic user interfaces). Wong, column 8, lines 65-66. When a request for image data is made, the client system downloads the appropriate GUI for the particular image data, as needed. Wong, column 9, lines 8-21. Therefore, there is no teaching or suggestion in Wong of a container application that is configured to communicate patient data between first and second components and a common user interface.

Further, Mason does not teach or suggest a container application with first and second user interface layers configured to communicate patient data between the functionality code segments of first and second components, respectively, and a common user interface. Rather, Mason teaches an application program interface (API) that provides objects or values which an application programmer can use to create an application computer program which provides DICOM (Digital Imaging and Communication in Medicine) services and conforms to the DICOM standard protocol. Mason, column 1, line 66 to column 2, line 11 and column 3, lines

16-24 and lines 57-65. An application program interface (API) is used to assist a programmer with the development of computer applications. Mason, column 1, lines 48-63. It is not clear from the office action what in Mason the Examiner considers to correspond to the container application features of claim 1. The examiner made a general reference to a large portion of text that describes certain features of the five software layers of the API toolkit (column 5 line 26 to column 6 line 58) that can be used to create an application for a PACS system that conform to the DICOM standard. However, there is no discussion of first and second user interface layers of a container application that are configured to communicate patient data between the functionality code segments of first and second components and a user interface.

Therefore, neither Wong nor Mason, either separately or together, teaches or suggests a container application with first and second user interface layers configured to communicate patient data between the functionality code segments of first and second components, respectively, and a user interface.

Claims 2-6 depend from amended claim 1 and incorporate all of the limitations of amended claim 1 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 1.

Accordingly, claims 1-6 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1-6 is respectfully requested.

B. Allowability of Independent Claim 7 and Dependent Claims 8-11

Claim 7 is directed towards a data management system for patient data and requires, among other elements, a data manager in communication with first and second applications. The data manager includes a user interface code segment in communication with the first and second applications for receiving patient image data and patient text data for generating display signals based on the patient image data and the patient text data according to a predetermined display format. As discussed above, in one embodiment, the data manager can be configured to integrate the functionality of a PACS application, a RIS application and other applications. In particular, the data manager can be configured to convert the PACS and RIS user interfaces to a uniform user interface format.

In contrast, neither Wong nor Mason teaches or suggests a data manager including a user interface code segment in communication with first and second applications for receiving the patient image data and the patient text data for generating display signals based on the patient image data and the patient text data according to a predetermined format, as admitted by the examiner. Rather, as discussed above with respect to amended claim 1, Mason teaches an application program interface (API) that provides objects or values which an application programmer can use to create an application computer program which provides DICOM (Digital Imaging and Communication in Medicine) services and conforms to the DICOM standard protocol. Mason, column 1, line 66 to column 2, line 11 and column 3, lines 16-24 and lines 57-65. The text in Mason cited by the examiner (column 7, lines 15-63) discusses the preferred software environment for the API toolkit and a general discussion of the DICOM services and functions that are implemented in the toolkit. There is, however, no discussion in Mason of a data manager including a user interface code segment for generating display signals based on the patient image data and the patient text data according to a predetermined format.

Therefore, neither Wong nor Mason, either separately or together, teaches or suggests a data manager including a user interface code segment in communication with first and second applications for receiving the patient image data and the patient text data for generating display signals based on the patient image data and the patient text data according to a predetermined format.

Claims 8-11 depend from claim 7 and incorporate all of the limitations of claim 7 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to claim 7.

Accordingly, claims 7-11 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 7-11 is respectfully requested.

C. Allowability of Independent Claim 19 and Dependent Claims 20-21

Claim 19 is directed towards a data management system for patient data and requires, among other elements, third means for communicating between first and second means, for receiving patient image data and patient text data from the first and second means, and for

displaying the patient image data and patient text data according to a predetermined display format. As discussed above, one exemplary embodiment of the data management system can include means configured to integrate the functionality of a PACS application and a RIS application, e.g., converting the PACS and RIS user interfaces to a uniform user interface format.

As discussed above with respect to claim 7, neither Wong nor Mason, either separately or together, teaches or suggests displaying patient image data and patient text data according to a predetermined display format. In addition, the text in Mason cited by the examiner (column 12, lines 33-67) discusses a messaging subsystem of the toolkit, DICOM QUERY/RETRIEVE services of the toolkit and a toolkit database. There is, however, no discussion in Mason of a means for communicating between first and second means, for receiving patient image data and patient text data from the first and second means, and for displaying the patient image data and patient text data according to a predetermined display format. Therefore, claim 19 is allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to claim 7.

Claims 20-21 depend from claim 19 and incorporate all of the limitations of claim 19 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to claim 19.

Accordingly, claims 19-21 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 19-21 is respectfully requested.

D. Allowability of Independent Claim 22 and Dependent Claims 23-27

Claim 22 is directed towards a method for displaying patient data from a plurality of applications and requires, among other things, configuring both patient image data and patient text data according to a predetermined display format and displaying the configured patient image data and patient text data. As discussed above with respect to claims 7 and 19, neither Wong nor Mason, either separately or together, teaches or suggests displaying patient image data and patient text data according to a predetermined display format. In addition, the text cited by the examiner in Mason (column 5, lines 39-67) discusses features of the association layer of the API toolkit such as mapping unique identifiers (UID) and a DICOM negotiation

policy. There is, however, no discussion in Mason of a means for communicating between first and second means, for receiving patient image data and patient text data from the first and second means, and for displaying the patient image data and patient text data according to a predetermined display format. Therefore, claim 22 is allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to claims 7 and 19.

Claims 23-27 depend from claim 22 and incorporate all of the limitations of claim 22 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to claim 22.

Accordingly, claims 22-27 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 22-27 is respectfully requested.

Accordingly, claims 1, 4-11 and 19-27 are believed to be allowable. Withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1, 4-11 and 19-27 is respectfully requested.

2. New Claims 28-31

New dependent claims 28-31 have been added to the application. Claims 28-31 depend from amended claim 1 and incorporate all of the limitations of amended claim 1 and are therefore allowable over Wong in view of Mason for, among other reasons, the same reasons as given above with respect to amended claim 1.

Accordingly, allowance of new claims 28-31 is respectfully requested.

3. Conclusion

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of the application is respectfully requested. Should the Examiner have any remaining questions, the Examiner is invited to contact the undersigned at the telephone number appearing below.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.116-1.17, or credit any overpayment, to Deposit Account No. 07-0845.

Respectfully submitted,

Date 12/12/02

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

- ***Marked up version of the first full paragraph at page 2, lines 2-4 :***

This application is a continuation-in-part of commonly assigned U.S. Application No. [] / [] 09/474,569, filed December 29, 1999, entitled "PATIENT DATA INFORMATION SYSTEM" to Lamer et al.

- ***Marked up rewritten claim:***

1 1. (Once Amended) A data management system for patient data,
2 comprising:
3 a first component having a functionality code segment and a user
4 interface code segment;
5 a second component having a functionality code segment and a user
6 interface code segment; and
7 a container application having a first user interface layer in communication with
8 the first component and a second user interface layer in communication with the
9 second component, wherein the first and second user interface layers are configured to
10 communicate patient data between the functionality code segments of the first and
11 second components, respectively, and a common user interface.